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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/099,769	03/14/2002	Gerald Wojcik	2156-090A	4845

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EXAMINER

ZHENG, LOIS L

ART UNIT	PAPER NUMBER
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1742

DATE MAILED: 08/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/099,769

Applicant(s)

WOJCIK ET AL.

Examiner

Lois Zheng

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 44-74 is/are pending in the application.
- 4a) Of the above claim(s) 1-30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 44-74 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 17 May 2004 has been entered.
2. Based on the amendments filed by the applicants, claims 1-43, and 59 have been cancelled. New claims 60-74 have been appended. Claims 44-58 and 60-74 are currently pending.
3. The indicated allowability of claims 44-57 is withdrawn in view of the newly discovered reference(s) to Inbe et al 6,419,731 B2(Inbe). Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
5. Claims 60-66, and 74 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to

one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

6. The new claim 60 presented in the amendment filed on April 28, 2004 claims aluminum ions in the treating solution. However, the concept of aluminum ion is never disclosed in the original specification. Aluminum ions can be produced from any compound containing aluminum other than aluminum salts. The original scope of the specification is limited to aluminum salts only. Therefore, claim 60 has a much broader scope than originally disclosed, which constitutes new matter under 35 USC 132 or MPEP 601.01. Claims 61-66, and 74 are also rejected since they are dependent on claim 60.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 44, 51, 58, 60, 67 and 74 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dolan 5,449,415(Dolan), and further in view of Inbe et al 6,419,731 B2(Inbe).

9. Dolan discloses a chromium free conversion coating method that utilizes an aqueous acidic liquid for treating metals(abstract). Therefore, Dolan meets the preamble of "forming a conversion layer on a metallic surface" and the claimed step of

"treating the metallic surface with an aqueous treating solution". Dolan teaches that the treating solution may include zirconium and tungstate (abstract, claims 5-6), as recited in claims 44, 51, 60 and 67, and that the advantage of using tungstate is to improve corrosion resistance of the metal (col. 6, line 34-39). Dolan further teaches a drying step after the metal surface is being treated with the treating solution (claim 5(II)). However, Dolan does not disclose the use of a soluble aluminum salt with claimed amounts in claims 44, 51, 60 and 67 in the treating solution.

10. Inbe discloses a nonchromate rust preventative agent for aluminum comprising a zirconium compound, a fluoride ion, a water-soluble resin and an aluminum salt (abstract). The aluminum ions supplied by the aluminum salt facilitate the formation of a rust preventive film (col 4, line 34-38).

11. Since both Dolan and Inbe's teachings are chromate free metal coating methods, and both methods involve the use of zirconium, it would have been obvious to one of ordinary skill in the art to have added the aluminum salt as taught by Inbe to the metal treating solution containing tungstate and zirconium as taught by Dolan for the expected advantage of enhancing rust resistance of the conversion coating disclosed by Inbe.

12. Furthermore, Inbe discloses that examples of aluminum salt that can be used are aluminum nitrate, aluminum sulfate (col. 4, line 16-22), and the concentration of the aluminum salt being 10-10,000 ppm as aluminum ion (col. 2, lines 1-2). The range of amount of aluminum salt disclosed by Inbe overlaps the amount ranges in claims 44 and 51 of the instant invention. The selection of desired aluminum salt/ion amount from

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disclosed range of Inbe would have been within the expected skill in the art since Inbe teaches the same utility for aluminum salt in the whole range.

13. Claims 45-50, 52-57, 61-66 and 68-73 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dolan in view of Inbe, as applied to claims 44, 51, 66 and 67 above, and further in view of Wada et al 6,193,815 B1(Wada).

14. The teachings of Dolan, in view of Inbe are described above in paragraphs 9 and 10. However, Dolan in view of Inbe fails to teach:

- a) the use of the claimed ammonium hydroxide in the treating solution, and
- b) the claimed sources of tungstate.

15. Wada discloses an aqueous acid liquid composition for treating the surface of aluminum metals(abstract). The treating liquid as taught by Wada may include tungstic acid and water soluble salt of tungstic acid(abstract).

16. With respect to claims 45, 52, 61 and 68 of the instant invention, Wada further discloses the use of ammonium hydroxide to adjust the pH of the surface treating solution to prevent pH of the solution from dropping too low, which would cause excessive etch of the metal surface, and pH of the solution from rising too high, which would cause lower corrosion resistance (col 5, line 40-54). Since Dolan, Inbe and Wada are all directed to methods of treating metal surfaces, it would have been obvious to one of ordinary skill in the art to have incorporated the ~~claimed~~ ammonium hydroxide to adjust pH of the treating solution, as taught by Wada, into the treating solution of Dolan in view of Inbe in order to avoid excessive etch of the metal surface and lower corrosion resistance as taught by Wada.

17. With respect to claims 46-48, 53-55, 62-64 and 69-71 of the instant invention, Wada teaches that the source of tungstate can be any water soluble tungstate salt(col 5, line 21-22). Furthermore, the use of sodium and potassium is preferred as sources of tungstate due to their low cost(col 5, line 22-24). Therefore, it would have been obvious to one of ordinary skill in the art to have incorporated any soluble tungstate salt, including the types of tungstate salt claimed by the instant invention, as taught by Wada, into the treating solution of Dolan in view of Inbe for enhanced metal corrosion resistance at lower cost as disclosed by Wada.

18. With respect to claims 49, 56, 65 and 72 of the instant invention, Dolan teaches the use of fluozirconate (i.e., ZrF_6^{-2}), as preferred anions, and the use of ionizable hydrogen atoms in the metal surface treating solution (Col 2, line 14-24). Therefore, the use of dihydrogen hexafluorozirconate, as recited in claims 49, 56, 65 and 72, does not distinguish over Dolan in view of Inbe.

19. With respect to claims 50, 57, 66 and 73 of the instant invention, Dolan discloses the use of an organic polymer (col. 2, line 60-61). Therefore, claims 50, 57, 66 and 73 do not distinguish over Dolan in view of Inbe.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lois Zheng whose telephone number is (571) 212-1248. The examiner can normally be reached on 8:30am - 5:00pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 212-1244. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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